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How individual coping, mental health, and parental behavior is related to identity development in emerging adults in seven countries

Inge Seiffge-Krenke[1] & Katharina Weitkamp[2]

[1]University of Mainz, Mainz, Germany

[2]University of Zürich, Zürich, Switzerland

Corresponding author:

Prof Dr. Inge Seiffge-Krenke

Psychologisches Institut, Universität Mainz, Wallstrasse 2-5, 55112 Mainz

e-mail: seiffge-krenke@uni-mainz.de

Abstract

So far, there is a dearth of research comparing identity processes across cultures and its contributing factors. In this study, the association of individual and family factors with identity processes was analyzed in 2,113 emerging adults (M = 22.0 years; 66 % female) from France, Germany, Greece, Peru, Pakistan, Poland, and Turkey. Exploration and commitment levels were highest in non-Western countries like Peru, Turkey, and Pakistan, whereas emerging adults in France scored lowest in exploration and commitment and reported highest levels in identity distress, internalizing/externalizing symptoms, and identity diffusion. Identity distress, coping with identity distress, parental behavior, and mental health were regressed on identity processes (exploration breadth/depth, commitment, and ruminative exploration). Distinctive patterns emerged; high identity distress, high identity diffusion, and high maternal anxious rearing in all countries were related to ruminative exploration. Findings were interpreted with a focus on universal and distinctive pathways in different countries in changing times.

Keywords: identity exploration, commitment, ruminative exploration, mental health, distress, coping, parental behavior

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Identity formation represents a core developmental challenge that young people are facing on their way to adulthood (Kroger & Marcia, 2011). Erikson (1968) defined identity as ”a sense of one’s self, resulting from the integration of past, present and future experiences“ (p. 36), emphasizing both continuity and change. In his approach, the cultural influence on the development of identity was unmistakable, as he studied identity processes in several cultures including European and Native American cultures in the US. Erikson brought identity development and psychopathology together already in his early writings (see Erikson, 1950). In fact, in the decades that followed, numerous studies showed that problematic identity development was associated with different mental disorders (see Klimstra & Denissen, 2017 for an overview). Furthermore, during recent years, studies have shown that parental dysfunctional behaviors affect the emerging adults’ identity development (Luyckx, Soenens, Vansteenkiste, Goossens, & Berzonsky, 2007). It is yet unclear, whether links between identity, parental rearing styles, and mental health found in Western countries generalize to emerging adults in non-Western countries and how strongly the individuals’ coping may influence identity. This study therefore sets out to explore the association of family and individual factors with identity in emerging adults from seven countries.

Identity development: Oscillating between Adaptation and Psychopathology

From the very beginning of identity research, the links between identity and adaptation were of great importance. Over decades, with a more fine-grained assessment of different identity components, associations with either adaptation or mental health problems became more evident. Marcia (1966) differentiated in his operationalization of Erikson’s work the two identity components of exploration (i.e. researching and examining identity alternatives in the areas of employment, partnership, and values) and commitment (i.e, choice of a specific

option in the field of occupation, partnership, and values). The Anglo-American and European research of the following years showed that both components had to be further differentiated (Luyckx, Duriez, Klimstra, & De Witte, 2010; Luyckx, Seiffge-Krenke, Schwartz, Crocetti, & Klimstra, 2014; Schwartz, Côté, & Arnett, 2005). Luyckx, Schwartz, Berzonsky, and colleagues (2008) extended Marcia's model, which resulted in three exploration processes and two commitment processes. The identity search may start with an active exploration of potential identity alternatives (exploration in breadth) before the making of decisions (commitment making). Subsequently, individuals may evaluate their identity commitments by comparing them to their own standards and values (exploration in depth), which, in turn, may lead to feelings of confidence and certainty about commitments (identification with commitment). If individuals do not identify with their commitments, the process can cycle back to a renewed exploration. However, many youth are uncertain as to where their explorations will lead them and might get stuck in this process. Accordingly, adaptive exploration (in breadth and in depth) is distinguished from maladaptive ruminative exploration, which is characterized by a repeated revisiting of the same identity questions (Luyckx, Schwartz, Berzonsky, et al., 2008), leading to a procastination of decisions.

Several authors stressed that contemporary Western societies have become increasingly individualistic and that societal changes such as a broader range of career options but also greater uncertainty in career planning may have contributed to more exploration (Arnett, 2000; Schoon & Silbereisen, 2009). In particular, too many different identity options in Western industrialized countries are held responsible for young people having trouble in forming a coherent identity and thus exhibiting quite high rates of ruminative exploration (Schwartz et al., 2005). Emerging adults in other parts of the world may be experiencing political unrest, facing unclear future options, or living in poverty (Larson, 2011). They have less freedom to choose their future lives for themselves and may experience a strong gap between intended and realized identity goals, for example due to economic hardship and little

job opportunities in the fields they explore. Additionally, young adults from more collectivist cultures need to coordinate their identity exploration, for example with respect to career planning and partner choice, with the interests and obligations of the extended family (Georgas, Berry, Vijver, Kagitçibasi, & Poortinga, 2006).

The notion that the developmental task of identity formation is not completed in adolescence any more, as Erikson (1968) suggested, but continues into emerging adulthood, was a public concern in Western countries ("they do not want to grow up", see Arnett, 2000, p. 471) which, however, was confirmed by empirical studies. Jane Kroger and coworkers (2010) summarized Western research of more than 500 cross-sectional and 150 longitudinal studies on Marcia's identity paradigm. The included studies were published from 1971 to 2004 and covered an age range of young people between 11-35 years. Their meta-analysis showed a marked delay in identity development, compared to the early studies by Marcia and co-workers, but also a continuous progression towards more mature stages of identity during emerging adulthood. These studies also clarified that proactive exploration is normative at times.

Maladaptive is, however, ruminative exploration, in which emerging adults keep on exploring and the identity development stagnates. Such a ruminative exploration is associated with a broad range of different forms of psychopathology (Klimstra & Denissen, 2017). Several studies reported an association between internalizing disorders, especially depression, and ruminative exploration (Kroger, 2007; Luyckx, Seiffge-Krenke, et al., 2008; Seiffge-Krenke & Escher, 2018). Generalized anxiety symptoms were also related to identity processes (Crocetti, Hale, Dimitrova, Abubakar, Gao, & Pesigan,, 2015). Links to externalizing disorders were less frequently found (Crocetti, Klimstra, Hale, Koot, & Meeus, 2013).

Already in Marcia's early work (1966), a status of identity diffusion was found which could be replicated and refined by later work of Luyckx, Goossens, Soenens, Beyers, &

Vansteenkiste (2005). They used four identity dimensions (Commitment Making, Identification with Commitment, Exploration in Depth, and Exploration in Breadth) to derive identity statuses by means of cluster analysis and confirmed that the diffuse cluster is characterized by a lack in commitment.

Such a diffuse identity status found in normative samples has to be distinguished from identity diffusion as a clinical phenomenon seen in patients. In these patients, the difficulty to discriminate between self and others in various domains can be diagnosed. The core criteria of a personality disorder, for example, are defined by two constructs: "identity" (the experience of oneself as unique, with clear boundaries between self and others) and "self-direction" (the ability to pursue goals in life and to self-reflect productively). It is therefore conclusive that identity problems and identity diffusion have been integrated into the diagnostics of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). Of note, in college students quite high rates were found, too: The prevalence rates ranged between 9.7% and 12% for identity diffusion (with unclear boundaries between self and others) and a rate of 18.8% for identity problems such as inability to decide between different options and a lack of commitment (Byrd & McKinney, 2012; Lambert, 2013; Turner, Camarillo, Daniel, Otero, & Parker, 2017). Identity diffusion was particularly high in youth with borderline personality disorders (Schmeck, Schlüter-Müller, Foelsch, & Doering, 2013). In these patients, boundaries with others are confused or lacking. They also suffer from poor differentiation of thoughts from actions, thus goal-setting ability is severely compromised, with unrealistic or incoherent goals.

Individual and Family Factors Influencing Identity Development

The process of identity formation can cause considerable amounts of distress in emerging adulthood, a period in life, which is characterized by instability and a wide array of opportunities (Arnett, 2000; Luyckx et al., 2013; Luyckx, Schwartz, Goossens, Soenens, &

Beyers, 2008). Sica, Aleni Sestito, and Ragozini (2014) reported that from all identity processes mainly ruminative exploration was positively associated with identity distress. Identity distress, in turn, has been positively related to internalizing symptoms (Hunt & Eisenberg, 2010).

Given the importance of identity formation for emerging adults' functioning, a number of authors have called for an examination of variables that might predispose individuals toward identity distress (Schwartz, 2005). The coping strategies that individuals use in dealing with identity stressors are hypothesized to function as important determinants of how individuals handle identity-related questions (Lazarus & Folkman, 1984; Skaletz & Seiffge-Krenke, 2010). In addition, with increasing age, there is a rise in the ability to adopt social roles, which in turn may result in an increase in identity commitment (Luyckx et al., 2013) and may further contribute to a decrease in identity related stress. There is some research showing that less adaptive coping styles were, over time, associated with ruminative exploration (Luyckx et al., 2013).

In this context it is highly relevant to look at parental dysfunctional behaviors and their effect on the child's identity development (Luyckx et al., 2007). In fact, studies in recent years have shown that parents support their "children" for too long (Seiffge-Krenke, 2006, 2009) and accompany their steps into adult life with anxious monitoring (Soenens & Vansteenkiste, 2010). According to the study by Kins, Soenens and Beyers (2013), parental anxiety ("separation anxiety") has a significant negative effect on the identity development of adult children and also leads to high symptom severity of the "children". In sum, these unfavorable parental behaviors were linked to delays in identity development and compromise the mental health of the offspring (Klimstra & Denissen, 2017).

In the context of impaired identity development and mental health, another parenting style has proved to be non-adaptive: parents' psychological control (eg. Barber, 2002; Barber, Stolz,

Olsen, Collins, & Burchinal, 2005). Such psychologically controlling behavior involves intrusive behavior, evoking feelings of guilt, or pushing the "child" into a particular direction of development. Several studies have found a link between those problematic parental behaviors and internalizing symptoms of emerging adult children (Barber, 2002; LeMoyne & Buchanan, 2011; Marano, 2008). However, it is unclear whether these associations apply only to young people from Western industrialized countries, or whether this extends to young people from other parts of the world.

The Present Study

So far, we know little about the identity of emerging adults in non-Western countries and the factors that contribute to adaptive or less adaptive identity processes. The body of evidence suggests that a complex model is necessary to capture individual and family influences on identity processes in a cultural context. The model of Bronfenbrenner (2005) served as a theoretical guideline for our research. According to Bronfenbrenner (2005), individual development takes place through processes of reciprocal interactions between an active, evolving biopsychological person and its immediate external environment. This environment consists of interrelated systems from proximal influences on a microsystemic level (home, family, friends) to macrosystemic influences on a societal level. Thus, we will be looking at person and context factors zooming out from the family to the country level.

Based on the theoretical outline proposed by Luyckx et al. (2008), we intended to investigate three identity processes: exploration (in breadth and depth), commitment (commitment making and identification with commitment), and ruminative exploration. We wanted to explore in what ways individual factors such as identity distress, coping styles, and the emerging adults' mental health are associated with these identity processes in students from different Western and non-Western countries. As described, mental health problems in Western college students have grown in complexity and severity, including internalizing and

externalizing symptoms, but also identity diffusion (Castillo & Schwartz, 2013; Goth et al., 2012). We need to explore whether this association also exists in students from non-Western countries and how their coping with identity distress contributes to identity processes. Since the impact of identity problems can be found in many disorders such as eating and personality disorders, self-injury, depression, or anxiety disorders (Lillevoll, Kroger, & Martinussen, 2013), we used in our study an indicator which includes internalizing and externalizing symptoms and, additionally, an index of identity diffusion in the clinical sense.

Parenting behaviors are expected to be influential on the three identity processes exploration, commitment, and ruminative exploration, and this association may vary among emerging adults from different countries. As earlier research in Western countries demonstrated that parental behaviors such as psychological control, a lack of or too much of support, and parental anxious monitoring (McNeely & Barber, 2010; Seiffge-Krenke & Escher, 2018) is influential, we intend to analyze these parental behaviors regarding their association with identity processes in emerging adults across several cultures. Taken together, this study sets out to explore in what ways parental rearing styles, identity distress, coping styles, and the emerging adults' mental health are associated with identity processes in students from different Western and non-Western countries.

To capture the period of early emerging adulthood, we focused on an age range of 20 to 24 years. All young people were students and lived in large university cities, to ensure a roughly comparable developmental context. We selected young people from two countries that are considered developing countries with major changes in education and the economy (UNICEF, 2014). These countries, Peru and Pakistan, are considered to be "tight cultures" according to Gelfand et al. (2011). This entails a climate of relatively strict parental behaviors and strict social norms, but at the same time both countries vary in strictness. Furthermore, we selected young people from two countries characterized by recent economic and political changes

(Turkey and Greece, see OECD, 2015), but at the same time have relatively close family ties (Georgas et al., 2006). We also selected young people from three European countries (France, Germany, and Poland) which, taken separately, may also show considerable variations in the quality of parent-child relationships. Countries also differ in terms of how exploration options are allowed and supported, as well as in future opportunities for the younger generation, aspects that may also affect exploration (especially ruminative exploration) and identity commitment.

In recent years, several cross-cultural studies were conducted on the associations between identity processes and mental health (Crocetti et al., 2015), well-being (Karaś, Cieciuch, Negru, & Crocetti, 2015), life satisfaction (Dimitrova et al., 2018), and parental trust and emotional separation (Sugimura et al., 2018). These studies focus mostly on adolescents in diverse cultural settings. To the best of our knowledge, so far no study exists that combines individual and family factors associated with identity processes, based on the model designed by Luycks et al.,(2008) in emerging adults from different cultures.

Thus, even though there are some studies touching part of identity processes and the relations to individual and family factors in a cross-cultural context, we could not postulate specific cross-cultural hypotheses for the constructs used in this study, applicable for this age period. But we expected differences in identity processes and also in perceived parental behaviors (Kagitçibasi, 2005; Kroger et al., 2010) between emerging adults from countries that tend to follow individualistic principles (such as in Germany and France) as compared to collectivist principles (eg. Peru and Pakistan) in child rearing, with potential implications for identity processes (Ijaz & Mahmood, 2009; Kagitçibasi, 2005; Marano, 2008). As regards the individuals' way of coping with identity distress, earlier cross-cultural research has shown quite uniform adaptive coping styles in dealing with stress despite country-specific stress levels (Persike & Seiffge-Krenke, 2016). Across all 18 countries, the adolescents in that study

exhibited active coping strategies such as seeking information, talking with people, seeking support, and reflecting about possible solutions when dealing with family-related stress. Apart from a few exceptions (Soenens, Duriez, & Goossens, 2005), comparative studies on coping and identity in different countries are lacking. Thus, we do not know how an adaptive coping style is related to identity exploration, commitment, and ruminative exploration; and further, what is specific for emerging adults from each of the seven countries.

We also explored gender differences, as there is research illustrating that females are ahead of males in several identity processes (Cramer, 2000); possibly because they have shorter developmental deadlines for the completion of the various tasks during their transition to adulthood (Heckhausen, Wrosch, & Fleeson, 2001). Previous studies also indicated higher rates for females in adaptive coping styles (Persike & Seiffge-Krenke, 2016); females also exhibit higher rates in in internalizing symptoms (Lillevoll et al., 2013). Consequently, when exploring the associations between identity processes and individual as well as family factors in the different cultural contexts, it is important to control for the influence of gender in the analyses.

Methods

Participants

Preliminary analyses indicated that samples of at least 100 participants were necessary to estimate reliable means. Therefore, to ensure sufficiently large samples in a number of countries, we aimed at sample sizes of $N = 300$ per country and ensured that the emerging adults came from a similar educational and developmental context. We collected data from a total sample of 2,113 emerging adults from seven different countries (France, Germany, Turkey, Greece, Peru, Pakistan, and Poland). Table 1 provides an overview of the sample's demographics for each country. Mean age and age variance were reasonably well balanced between the samples ($M = 22.0$; $SD = 2.04$). The gender ratio was also well balanced for all

countries, except Turkey, with 87% of participants being female. Even though all participants lived in larger university cities, there were marked differences in family structure and size between countries. Most emerging adults from Turkey (91.9%), Pakistan (88.9%), and Germany (88.8%) lived in two-parent families; emerging adults from France reported the lowest rate of two-parent families (60.4%). The number of siblings per family varied widely across countries, with the lowest found in Germany (M = 1.10), Greece (M = 1.40), and Peru (M = 1.40) and the highest in Pakistan (M = 3.60). Romantic partner status varied between 31.4% (Pakistan) and 91.9% (Turkey). The living situation was also quite diverse: The lowest percentage of emerging adults still living with their parents was reported in Germany (4.5%), and the highest was reported in Pakistan (86.8%). Turkish participants reported the lowest rate (4.9%) of residing with their romantic partners, and the highest rate was reported in France (19.1%). Most Germans (89.1%) and few Pakistanis (11.8%) lived alone or in some form of cohabitation.

[Insert Table 1 about here]

Procedure and Data Acquisition

In all countries, the assessments were conducted on students in university cities to limit variance due to differences in education and urbanization. The responsible ethics boards in each country approved the study. Participants were recruited by several means, including flyers, placards, and leaflets in central university facilities, as well as by in-class announcements. Participants did not receive any incentives to participate. Participants obtained consent forms several days prior to data collection. Of those emerging adults who showed initial interest in participating, 90% gave their written consent to participate in the study. About 13% of emerging adults were absent on the day of assessment, resulting in an overall dropout rate of about 23%. All assessments were conducted in a group setting.

Measures

Identity formation. Participants completed the Dimensions of Identity Development Scale (DIDS; Luyckx, Schwartz, Berzonsky, et al., 2008) which assess commitment making, identification with commitment, exploration in breadth, exploration in depth, and ruminative exploration with respect to future plans and possible life paths. The identity processes were each measured by five items on a 5-point scale, ranging from 1=*strongly disagree* to 5=*strongly agree*. Sample items include "I have decided on the direction I want to follow in my life." (commitment making), "I sense that the direction I want to take in my life will really suit me." (identification with commitment), "I regularly think over a number of different plans for the future." (exploration in breadth), "I regularly talk with other people about the plans for the future I have made for myself." (exploration in depth), and "It is hard for me to stop thinking about the direction I want to follow in my life." (ruminative exploration). In this study, we collapsed the two exploration dimensions into the dimension "exploration in breadth and depth" as well as the two commitment dimensions into the dimension "commitment". Cronbach's alphas ranged between α=.76 and α=.82 for exploration in breadth and depth, between α=.79 and .81 for commitment making and identification with commitment and between α=.74 and .85 for ruminative, respectively, across all countries.

Internalizing/externalizing symptoms. Emerging adults' mental health was assessed with the Young Adult Self Report (YASR; Achenbach, 1997), a 110-item self-report scale that measures emotional and behavioral problems, with a ternary answer format (1 = *not true*, 2 = *somewhat or sometimes true*, 3 = *often or very often true*). The YASR includes a broad array of syndromes of internalizing (e.g. anxious/depressed, withdrawn) and externalizing behavior (e.g., delinquent, aggressive). The YASR has been used frequently across countries with good reliability (see Agrez, Winkler Metzke, & Steinhausen, 2011). Due to high correlations between the internalizing and externalizing behavior of *r*=.76, we used the total symptom score, including both, internalizing and externalizing symptoms, in our analysis. In the present study Cronbach's alpha ranged between α=.80 - .94.

Identity diffusion. The Assessment of Identity Development in Adolescence (AIDA) was developed to measure clinically relevant identity diffusion (Goth et al., 2012). The AIDA comprises 58 items with a 5-point Likert scale (0 = *no* to 4= *yes*). The scales are *discontinuity* (27 items, for example, "I'm not sure if my friends really like me.") and *incoherence* (31 items, example, "I feel that I have many different faces and they don't go together very well."). Both scales may be summed up to a total score *diffusion* which we used in the current study (range α=.86 - .95).

Identity distress. Emerging adults' identity distress was measured with the Problem Questionnaire (PQ; Seiffge-Krenke, 1995), which assesses the perceptions of minor stressors in seven stress domains (further study, job, family, peers, romantic partner, identity, and future). The instrument consists of 64 typical and salient everyday stressors in these domains that participants rate on a 5-point scale from 1 = *not stressful at all* to 5 = *highly stressful*. In the present study, we used nine items pertaining to the domain of identity-related distress (e.g., a strong motivation to discover one's needs, perceived difficulty in obtaining desired employment, and insecurity about career choice and family and work-life balance). A sample item is, "I found it difficult to discover what profession really suits me." The PQ has been used frequently across countries with good reliability (e.g. Seiffge-Krenke et al., 2012).

Coping with identity distress. Participants completed the Coping Across Situations Questionnaire (CASQ; Seiffge-Krenke, 1995), which assesses 20 coping strategies across seven problem domains on a binary scale (0 = *strategy not used*; 1 = *used*). For the present study, we selected the identity domain to complement the stress domain. Three different coping styles were assessed. The first style, termed *Negotiating and Support Seeking*, comprises nine items such as "I discuss the problem with my parents." or "I try to solve the problem with the help of my friends." The second style, termed *Reflection*, includes six items such as "I think about the problem and try to find a solution." Five items measure the third style, termed *Avoidance and Emotional Control*, such as "I withdraw because I cannot change

anything in anyway". The CASQ has been used frequently across countries with good reliability (e.g. Persike & Seiffge-Krenke, 2016). In the present study Cronbach's alpha ranged between α=.76 - .85.

Perceived parental rearing styles. Participants completed an instrument that comprised 17 items, assessing a variety of aspects of perceived parental behavior, which are rated on a 5-point scale (1 = *not applicable* to 5 = *very appropriate*). The items were separately answered for mothers' and fathers' rearing styles. Five items stemmed from the Adolescent Family Process measure (AFP; Vazsonyi, Hibbert, & Blake Snider, 2003), such as "My mother/father often supports me". Furthermore, six items from Barber (2002) were used to record parental psychological control ("My mother/father no longer talks to me when I disagree with her/him."), as well as six items from a measure designed by Kins and colleagues (2013) to measure parental overprotection, in particular anxious monitoring ("My mother/father monitors each of my steps, if I want to be alone."). Reliability amounted to α=.76 - .91 for maternal support, α=.62 - .76 for maternal psychological control, and α=.65 - .75 for maternal anxious rearing in the current sample.

Senior and junior researchers from all seven countries translated the Perceived Parental Behavior scale into the official language of each country and then back into English. As stated above, the YASR, the PQ, and the CASQ had already been translated and used in previous cross-cultural studies (Persike & Seiffge-Krenke, 2016; Seiffge-Krenke et al., 2012). Further, the AIDA (Goth, Foelsch, Schlüter-Müller, & Schmeck, 2016) and the DIDS (Morsünbül & Çok, 2014) have been used in several cross-cultural samples.

Data Analysis

Initial analyses focused on the sample characteristics, to this end, mean, standard deviations, and correlations were calculated for study variables. To assess the variation between countries, we carried out analyses of variance using the general linear model analysis of variance with identity dimensions, stress, coping variables, mental health, and parental rearing

dimensions as the dependent variable and country as the independent variable. Specific differences between countries were checked with a post-hoc analysis of homogenous subsets using the Ryan-Einot-Gabriel-Welsh procedure (REGWQ). Additionally, we checked for gender differences, which we summarize shortly below due to space restrictions.

For the analysis of potential predictors of identity processes, we calculated hierarchical linear regression models. Dependent variables were the three identity variables: exploration in breadth and depth (short: exploration), commitment making and identification (short: commitment), and ruminative exploration (short: rumination). Based on the model by Bronfenbrenner, we entered the predictors from the micro- to the macrolevel, from intraindividual personal characteristics – Bronfenbrenner termed them "demand characteristics" (age, gender etc.) – to personal "resources" (coping etc.), followed by context variables ordered from the microsystem of family and finally to the macrosystem of society/country (Bronfenbrenner, 2005). Thus, predictors were entered in five steps: In the 1st step, age, gender, family status, and romantic partner status were entered, followed by stress and coping variables in the 2nd step. In the 3rd step, emerging adults' mental health (internalizing/externalizing symptoms and identity diffusion) were entered, followed by maternal and paternal rearing dimensions in the 4th step. Finally, country was entered in the 5th step. Data were checked for multicollinearity (with no indication) and visual inspection was applied of residual plots to get an understanding of data fit. Prior to the regression analyses, predictors were centered (i. e. parenting variables), and dummy variables were created for nominal variables (country, gender). Level of significance was set to the conventional $\alpha = .05$ (two-tailed). Effect sizes were interpreted following established conventions (Cohen, 1988). All data analyses were carried out with SPSS 22.0. No data was excluded from the study. Missing data was low (less than 2.1%). To further test the sensitivity of our analyses, regressions were carried out with a Bootstrap procedure with 1,000 samples stratified by country. These Bootstrap results will be reported in the results section below. For

each country and each measure (including each sub-scale) we looked at the internal consistency and the factor structure as a rough indicator of cross-cultural measurement invariance. Cronbach's alphas and expected factor structure were satisfactory to good (and similar) for all countries except Germany. Therefore, we decided to rerun the regression analyses with the total sample excluding the German subsample to control for potential bias based on the lower reliability of the measures in the German sample. Since these analyses resulted in highly similar findings, we will report results for the complete sample including Germany.

Results

Preliminary analysis

Table 2 presents means, standard deviations, and intercorrelations between the study variables.

[Insert Table 2 about here]

Overall, across all measures there were significant differences between all seven countries. The mean differences across countries tested by ANOVA are presented in Table 3.

[Insert Table 3 about here]

Effect sizes were small to moderate for exploration, commitment, identity distress, and coping measures as well as parental behaviors, but large for the symptom measures (internalizing/externalizing symptoms and identity diffusion) in the range of large effect sizes. As regards identity measures, exploration in breadth/depth was highest in Turkey, Peru, and Greece and lowest in France and Germany. Commitment (commitment making and identification with commitment) was highest in Turkey, Greece, and Pakistan and lowest again in France. Ruminative exploration was highest in Turkey, Greece, and Germany and lowest in France. Reported levels of identity distress were highest in France, followed by Germany. Young adults in Poland and Peru reported lowest levels of identity distress. For

negotiation and support seeking as a coping strategy, scores were highest in Turkey and Poland and lowest in Germany and Peru. Reflection as a coping style was highest in France and lowest in Germany. Similarly, avoidance/emotional control coping was higher in Germany and lowest in Greece and Peru. Young adults reported highest levels of internalizing/externalizing symptoms in France and Pakistan and lowest in Poland and Greece. Identity diffusion scores were highest in France and Germany followed by Pakistan, and scores were lowest in Peru and Greece. In terms of parental rearing dimensions, mother support was highest in Pakistan, Peru and Poland and lowest in France. Father support was highest in Pakistan, Peru, and Turkey; and again lowest in France. Mother psychological control was highest in Pakistan followed by France and Turkey; scores were lowest in Germany and Greece. For father psychological control, scores were highest for Germany, followed by Pakistan, and lowest in Greece and Peru. Mother anxious rearing was highest in Pakistan, followed by Turkey and Peru with slightly lower values in the other countries but lowest in France. For fathers, anxious rearing was highest in Pakistan as well as France, lowest in Germany, Poland, and Peru.

We also tested for gender differences across the variables, which are omitted due to space restriction. There were only a few variables with significant differences due to gender: young women reported significantly higher scores on internalizing/externalizing symptoms ($F=4.834$; $p\leq.028$; $\eta^2=.003$). Young men reported significantly higher scores for mother anxious rearing ($F=24.612$; $p<.001$; $\eta^2=.015$) and father psychological control ($F=6.790$; $p<.001$; $\eta^2=.004$).

Regression analysis

Table 4 presents the results of the hierarchical regression analysis for each of the three identity variables as the dependent outcome variables. The final model for identity exploration (exploration in breadth and depth), shown in the first column in Tab. 4, explained 32.0% of

variance. In the 1st step, sociodemographic variables were entered and age, step-parent family status as well as being in a romantic relationship seemed relevant for the variance explained (R^2=.02). Younger age, being in a step-parent family, and in a romantic relationship were related to less exploration. In the 2nd step, identity distress and coping styles were entered and lead to a significant increase in the variance explained (ΔR^2 = .05). Both, identity distress and negotiating and support seeking were relevant for this increase in variance: More identity distress was related to less exploration; more negotiating and support seeking was related to more exploration. In the 3rd step, symptomatology and identity diffusion were entered, both being significant (ΔR^2 = .10). More reported symptoms and more identity diffusion were related to less exploration. In the 4th step, maternal and paternal parenting behaviors were entered and significantly increased the variance explained (ΔR^2 = .05). Maternal and paternal support, but also maternal anxious rearing were positively associated with exploration. In the final step, dummy-coded country variables were entered and were responsible for a significant increase in variance explained (ΔR^2 = .12). Additionally, in the final model, only negotiating and support seeking was positively associated with exploration, and paternal psychological control was negatively associated with exploration. None of the other predictors were significant in the final model.

The results for commitment (commitment making and identification with commitment) are displayed in the second column in Tab. 4. The final model explained 32.0% of variance. In the 1st step, only step-parent family status was significant and thus responsible for the increase in variance explained. Living with a step-parent was associated with lower commitment compared with living in two-parent families. In the 2nd step, identity distress and coping was added to the model with a significant increase in explained variance (ΔR^2 = .13). While step-parent status remained significant, identity distress was significantly negatively associated with commitment. Additionally, negotiation and support seeking was positively associated with commitment. In the 3rd step, internalizing/externalizing symptoms and identity diffusion

were added to the model explaining a significant amount of variance ($\Delta R^2 = .10$). In this step, internalizing/externalizing symptoms and identity diffusion were negatively associated with commitment. In the 4th step maternal and paternal rearing behaviors were entered which accounted for a significant but small increase in explained variance ($\Delta R^2 = .02$). Maternal psychological control and paternal anxious rearing were negatively associated with commitment, indicating that more maternal control and more anxious rearing on the side of the father were related to less commitment. Furthermore, mother's anxious rearing, fathers' support, and father's psychological control were positively associated with commitment. In the final model, country comparisons were entered. The country variables accounted for a significant increase in variance explained ($\Delta R^2 = .06$). In this final model, commitment was negatively associated with identity distress, indicating that higher levels of distress were related to lower levels of commitment. Further, commitment was positively associated with negotiation and support seeking and negatively associated with avoidance/control. Thus, more commitment was related to more negotiation and support seeking and less coping via avoidance/emotional control. Additionally, commitment was negatively associated with identity diffusion; more diffusion was related to less commitment. None of the parental rearing behaviors was significantly associated with commitment in the final model when country was added to the regression. Additionally, we did not find any significant association of commitment with neither age, gender, family status, romantic partner status, internalizing/externalizing symptoms, nor reflection coping.

Regression results for ruminative exploration are displayed in the last column in Tab. 4. The final model explained 25.4% of variance. In the 1st step, a small significant amount of variance was explained by the sociodemographic variables (R^2=.01). Only age was a significant predictor, indicating that older participants reported relatively more ruminative exploration. In the 2nd step a significant amount of variance was explained ($\Delta R^2 = .12$) by higher levels of identity distress and avoidance/emotional control coping, which were

significant predictors and associated with more ruminative exploration. In the 3rd step, a significant amount of additional variance was explained (ΔR^2 = .02) by internalizing/externalizing symptoms and identity diffusion; where less symptoms and more identity diffusion were related to more ruminative exploration. In the 4th step, the following rearing behaviors lead to a small but significant increase in the explained variance (ΔR^2 = .02). Maternal support and maternal anxious rearing were the significant predictors, with more anxious rearing behaviors and more support being associated with more ruminative exploration. In the final model, country of origin accounted for a significant amount of additional variance (ΔR^2 = .09). The dummy coded variables for Poland vs. France, Poland vs. Greece, and Poland vs. Pakistan were significant. In the final model, older age, higher levels of identity distress and internalizing/externalizing symptoms were related to more ruminative exploration. Additionally, in terms of identity diffusion, we found a positive association such that more diffusion was related to more ruminative exploration. Parental rearing styles were unrelated to ruminative exploration.

Discussion

Summarizing research on identity development in Western countries, Kroger, Martinussen, & Marcia (2010) were able to demonstrate that identity development continues well into young adulthood with about 42% of young people at the age of 30 showing a mature identity, e.g. commitment after an extensive exploration phase. Overall, this meta-analysis demonstrated slow progression of identity development over the decades from adolescence to emerging adulthood among young people in many Western countries. Studies on emerging adults' identity from non-Western countries are incomplete. Our study on emerging adults in seven countries around the world focused on the identity processes of exploration, commitment, and ruminative exploration. Although based solely on self-report data and having a limited approach with a cross-sectional design, our results nevertheless reinforced and expanded

previous findings from Western countries about associations between central identity processes and individual and family-related variables. We substantiated rather similar levels in all identity processes, but also some important differences between emerging adults from France, Germany, Turkey, Greece, Peru, Pakistan, and Poland. Specifically, the findings demonstrated substantial relationships between identity distress, individual coping, parental behavior and all three identity processes.

Identity processes and its associations with individual and family factors across cultures

As a result of demographic and economic transformations that have taken place in recent years in Europe and North America, the process of growing up, including identity formation, has changed significantly compared to previous generations (Arnett, 2000; Brzezińska & Cieciuch, 2016; Bynner, 2005). Research demonstrated a considerable delay and qualitative change (high exploration, low commitment) in identity development of emerging adults in many Western industrialized countries (Kroger et al., 2010). Our study, conducted on emerging adults with a mean age of 22 years from France, Germany, Turkey, Greece, Peru, Pakistan, and Poland showed rather similar levels across countries in all identity processes. Another important finding of our study relate to the links between identity processes and identity distress. Similar to earlier studies (Sica et al., 2014), we found substantial positive correlations between identity distress and ruminative exploration across countries. Furthermore, identity distress was associated with lower scores in both exploration and commitment. It is plausible, that high stress levels may procrastinate identity development (Luyckx, Klimstra, Duriez, Schwartz, & Vanhalst, 2012). Additionally, it seems clinically relevant that more adaptive identity processes such as exploration and commitment are affected by stress. Interventions should therefore focus on the identification of obstacles also in these identity processes in order to advance identity development.

Coping strategies that emerging adults use in dealing with identity distress were important determinants of how they handle identity-related stress (Luyckx et al., 2012). In our study, the associations between certain coping styles and identity exploration and commitment were significant, but low. Similar to the findings of Luyckx et al. (2012) and Grotevant (1987), the positive association between negotiating/support seeking as a coping style and identity exploration and commitment suggests that social support seeking may serve as a beneficial resource for making identity related choices. We found a small but positive association between a less adaptive coping style (avoidance and emotional control) and a less adaptive identity process (ruminative exploration), expanding the findings of Soenens et al. (2005) across different cultures.

Additionally, we were able to replicate earlier research from Western countries with regard to the relationships between perceived parenting style and identity processes. In accordance with earlier studies (see for example Cordeiro, Paixão, Lens, Lacante, & Luyckx, 2018), we could substantiate positive associations between warm, supportive relationships with both parents and identity exploration and identity commitment across countries. Additionally, parental psychological control and anxious rearing were positively associated with ruminative exploration. However, these parenting effects changed or disappeared in the final model, when country of origin was entered in the regression analyses. Because most research on anxious rearing and psychological control has been conducted with samples from Western countries, a debate has arisen about whether such findings generalize to other cultures (Pomerantz & Wang, 2009). Soenens et al. (2012) demonstrate on Belgium and Korean samples, that parental tactics including guilt induction, shaming, and instilling anxiety seemed to be an inappropriate practice with a strong impact on mental health. Our results highlight that this association generalized not only with respect to mental health, where we found strong associations to internalizing and externalizing symptoms and identity diffusion across seven countries. In addition, identity exploration and commitment of emerging adults from different

countries in Europe, South America, and Asia, were hampered by parental psychological control. Our findings are thus in line with Rowe et al. (1994) suggesting that fundamental developmental processes involved in adjustment tend to be highly similar in Western and non-Western countries.

Finally, our findings on the associations between mental health and identity processes are in accordance with research suggesting a strong impact of diverse psychological symptoms on identity functioning (Klimstra & Denissen, 2017; Schwartz et al., 2011). Mental health issues among college students are usually related to adjustment and developmental challenges with a strong focus on the transition to college and the early years at university. Our study on students in their early twenties demonstrated that identity processes are closely intertwined with mental health. In particular, identity diffusion and internalizing and externalizing symptoms were positively associated with ruminative exploration, a finding similar to the considerable levels of depression, identity problems, and identity diffusion found among Western students (Byrd & McKinney, 2012; Goth et al., 2012). Additionally, lower levels of identity diffusion were associated with more exploration and commitment across countries. Future longitudinal studies may clarify the potential bidirectional nature of these associations, whether compromised mental health slows down further identity development, or whether an early diagnosis and treatment may help to form a coherent identity and thus contributes to successful educational attainment, employment, and interpersonal relationships remains to be seen (Eisenberg, Speer, & Hunt, 2012; Hunt & Eisenberg, 2010).

Important differences: Higher exploration and commitment scores in emerging adults from certain countries

Even though in all seven countries students experienced a good balance between identity exploration and commitment, there were also some notable differences. Emerging adults from countries like Peru, Pakistan, or Turkey, which suffer from economic hardships and have less

favorable future prospects with respect to developing their identity, for example in the professional domain, were much more active, as demonstrated by their higher levels in exploration and in commitment. They reported to explore much more, but also tended to make choices and to feel confident about their choices, compared with emerging adults from Europe, for example from France and Germany. Of note, emerging adults from Poland and Greece, who live under more unsecure conditions with respect to job security and individual choices (Schoon & Silbereisen, 2009; UNICEF, 2014), exhibited higher levels in identity exploration and commitment than their contemporaries in France and Germany. We speculate that well-educated emerging adults in countries such as Greece, Turkey, Poland, Pakistan, and Peru would show an earlier subsequent commitment to adult roles than, for example, emerging adults in France and Germany. The availability of (too) many choices, as it is the case for emerging adults from France and Germany, may not necessarily be an advantage. If many options are available, this may slow down identity-related activities. Students from France and Germany, who live under relatively secure economic conditions with a lot of institutional support for the transitional phase, may feel less pressure to push ahead their identity development. In these Western countries, life course in general is left to the individual to decide on their own, whereas in other countries life course events are more normatively structured with more regard for the extended family for identity-related decisions. However, with our cross-sectional sample ranging from 20 to 24, we cannot conclude that in the long run faster identity development is better. It may be that the longer process of identity development will ultimately be an advantage in the 30s and beyond. Thus, each pathway could be adaptive for students of a particular country under its specific developmental conditions, a speculation that would need to be considered by future studies.

Gelfand et al. (2011) have suggested that identity development may be more of an individual project in Western contexts, but a more collective project (e.g., decisions are made by the family rather than by the individual in non-Western countries). Thus, it is necessary to be

aware of the associations between identity processes and perceived family relations in addition to different opportunities and chances for identity exploration in some countries. Emerging adults from Pakistan, Peru, and Turkey, who exhibited higher activity in identity exploration and commitment, reported also quite high support levels from fathers and mothers. This could point to a potential positive impingement of these parental dimensions on identity processes, buffering potential aversive life circumstances in these countries. Of note, the scores for perceived parental psychological control in these countries were also quite high. This suggests that psychological control could be interpreted as hostile and intrusive by emerging adults from individualistic countries (such as France and Germany), but it may be interpreted as more benign and appropriate by emerging adults from countries with a more collectivistic cultural climate, such as Pakistan, Peru, and Turkey. Further, differences in identity distress and the emerging adult's mental health come into play. Distress levels and level of internalizing and externalizing symptomatology were comparably low in emerging adults from Pakistan, Peru, and Turkey, suggesting that the individual resources were considered as quite positive. Taken together, emerging adults from these countries seem to experience a reasonable balance between identity challenges and individual and family resources.

Out of the European countries, emerging adults from France were characterized by the lowest exploration and commitment levels, but quite high levels in identity distress and reflection about possible solutions as a coping style in dealing with distress. Similarly, their overall levels of internalizing and externalizing symptoms were the highest. Among the European countries, emerging adults from France seem unique insofar as they also report quite low levels of parental support. The rate of unemployment for 15 to 24 years old in France reached 28% and is thus considerably higher than in Germany, but not as high as in many other countries such as Peru, Greece, Pakistan, Turkey, or Poland. As the study by Lannegrand-Willems, Perchec, and Marchal (2016) demonstrated, French young people struggle with their

vocational identity. Our findings showed that objective societal conditions may set the frame for identity formation and its challenges, but additionally the individual and family resources come into play. Together, this suggests that emerging adults from France were trying to come to terms with identity distress while, at the same time, lacking family resources dealing with these challenges. Their identity processes seemed to be less developed, compared with the levels of peers in the other countries. Again, these findings underline that there may be different developmental routes to establish a mature identity (Schwartz, 2005) and that individual and family factors may play a considerable role therein.

Regression of identity processes: What is distinctive?

In the regression analyses for identity exploration, commitment, and ruminative exploration distinctive predictors emerged for each identity process, but also country-specific differences were evident. Some of these findings corroborate earlier reported results, but cultural aspects were particularly evident in the results of the regression analyses in line with Bronfenbrenner's model (2005) of societal influences on individual development. Therefore, we focus on the interpretation of the final regression models, which added the country variables as separate terms.

In the final model for identity exploration (exploration in breadth and depth), adaptive coping styles such as negotiating and support seeking were related to more identity exploration. Additionally, paternal psychological control was negatively associated with exploration: more control lead to less identity exploration. In accordance with Soenens et al. (2005), Luyckx et al. (2012), and Luyckx et al. (2013), this result indicates that an active coping style is particularly useful for productive exploratory behavior, and that young people may also turn to others in need for help and advice during the exploration phase. Further, any pressure that fathers exert seems to be a hindrance, restricting or lowering the individual's exploratory activities. Apparently, in all countries, fathers must be sympathetic to the exploration process

of their grown up children, a finding underscoring the considerable long-term impact of fathers for the child's professional choice and academic career found by Flouri (2005).

In contrast to the findings reported by Luyckx et al. (2012), in our study the coping style of negotiation and support seeking was also relevant for predicting identity commitment. Additionally, higher levels of identity commitment were predicted by less stress, less identity diffusion and less avoidance and emotional control. This association between adaptive coping styles and identity commitment fits well with the hypothesis that active problem-focused approaches may help with identity-related questions (Lazarus & Folkman, 1984; Skaletz & Seiffge-Krenke, 2010), whereas avoidant coping and emotion-focused coping strategies are less appropriate when making choices and comitting to these choices is at stake. Low stress levels and a clear distinction between self and others (Gfellner & Córdoba, 2011) seem to be highly relevant for predicting this identity process.

In the last model, we analyzed which individual and family variables may predispose students from different countries towards ruminative exploration, the least adaptive approach to progress in identity development. It is not surprising that identity diffusion, e. g. unclear boundaries between self and others, play a prominent role here: More identity diffusion was associated with higher levels of rumination. Additionally, older age, more identity distress, and higher levels of internalizing and externalizing symptoms were also associated with higher levels of rumination. This is in line with several research findings in the field, with identity distress and compromised mental health being associated with rumination (Klimstra & Denissen, 2017; Sica et al., 2014; Wängqvist & Frisén, 2011). Thus, it seems like a robust finding across Western and non-Western countries that ruminative exploration is associated with a number of maladaptive processes. Overwhelmed by stress and suffering from unclear boundaries between themselves and others, we can understand that students from all seven counties have trouble forming a coherent identity and making decisions, which may advance

their identity development. Whether the lack of identity coherence may prevent them from taking advantage of the opportunities presented in their countries or procrastinate decisions, could be an interesting research question for longitudinal studies in the future.

Interestingly, the proposed detrimental effect of parental anxious rearing (Kins et al., 2013; Klimstra & Denissen, 2017) could not be found in our data when looked at all countries taken together. In the final models, only paternal psychological control was negatively associated with exploration in breadth/depth across countries, which, in turn, emphasizes the already mentioned strong paternal influences in this developmental phase.

Limitations

The current study had a number of important limitations including the cross-sectional research design, the reliance on self-report, and the use of relatively homogenous, well-educated student samples. However, the homogenous sample (students from large university cities) was necessary for detecting country specific differences. Thus, our results are not generalizable to emerging adults who are in the job market or unemployed. Therefore, future studies should also include emerging adults from the same countries with a higher variation in SES, education, professional choices, and living circumstances. It can be assumed that young people who suffer from economic crisis, who are unemployed or have precarious working conditions may be limited in their identity exploration. One can further assume that the parental support systems are impaired and their health is compromised. It is important to note that we did not asses the five identity processes, suggested in the Model by Luyckx and colleagues (2008), but collapsed them to three. This is a limitation of this study, as we could not capture the dynamics of the identity process. Another limitation relates to psychometric properties of the measures. Analyses were satisfactory to good with the exception of the German data set. Therefore, we decided to rerun the regression analyses with the total sample excluding the German subsample to control for potential bias based on the lower reliability of

the measures in the German sample. These analyses resulted in highly similar findings. However, the necessity remains to replicate the findings, especially with respect to the German sample, as the Cronbach's alphas in this subsample were less satisfactory than in the other countries. Future studies should also consider the cross-cultural measurement invariance which has not been sufficiently tested in some of the utilized measures.

Our approach focused on a paper-pencil self report. Thus, it would be necessary to triangulate the results in future studies with qualitative data, for example by using interview techniques with the emerging adults and to collect data from the parents. Additionally, due to the cross-sectional design, we were not able to explore the longitudinal interplay between the variables assessed. That is particularly relevant for the identity dimensions exploration and commitment, which combined, as mentioned, in our study four different identity processes (Luyckx, Goossens, Soenens, & Beyers, 2006). The equally strong activity in exploration and commitment of emerging adults growing up in a university context in our study suggests a similarly high activity in processes that advance identity development. Future studies should longitudinally follow the process of identity formation in detail on all five dimensions to uncover the feedback loops between the exploration and commitment (Luyckx, Schwartz, Berzonsky, et al., 2008). In addition, future studies should try to capture the interplay between identity processes, parenting, coping, and mental health in emerging adults from different cultural contexts across time. It has been shown, that identity exploration and coping are largely intertwined and influence each other over time (Luyckx et al., 2013). Further, reciprocal links between mental health and identity as well as parental rearing styles and identity do exist over time (Klimstra & Denissen, 2017; Luyckx et al., 2007). It is necessary to replicate and validate those relationships, which have been established in previous research on European and North-American samples, on a broad cultural basis.

Conclusion

Taken together, this study advances our knowledge on identity processes in several ways. It demonstrated that young people in the seven countries experience identity processes such as exploration, commitment, and ruminative exploration despite country specific mean differences, perhaps because students in these countries undergo similar life transitions at approximately the same age. It further highlights the strong association of individuals' coping and family factors with identity processes. It was surprising to what extent coping competence and an enabling, less psychologically controlling parenting style of fathers was linked with identity exploration in students from Western and non-Western countries likewise. A comprised health and high levels of identity distress were associated with the difficulty to make choices, and to procrastinate decisions that could advance identity development in students from all countries.

Cultural specific findings were also obvious: emerging adults in Western countries like Germany and France seemed to slow down exploration and commitment processes and were much less active than young people from Pakistan, Peru, Greece, Poland, or Turkey. However, even under comparably favorable socio-economic conditions for identity formation, too many options and the lack of supportive parental relationships was associated with higher stress levels and more mental health problems, which were linked with less exploration and commitment, for example for emerging adults in France.

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Table 1

Sample Demographics by Country

	Sample		Age		# siblings		high-school or above				Living situation		
	n	female	*M*	*SD*	*M*	*SD*	Mother	father	2-parent household	romantic partner	with parents	with partner	alone or other
France	230	64.3%	21.7	1.80	1.7	1.78	76.1%	60.4%	60.4%	54.3%	19.6%	19.1%	61.3%
Germany	357	61.6%	23.9	2.73	1.1	0.92	77.6%	89.9%	88.8%	61.1%	4.5%	6.4%	89.1%
Turkey	307	87.0%	21.9	2.63	2.0	1.37	59.5%	76.7%	91.9%	51.8%	64.7%	4.9%	30.4%
Greece	300	64.0%	22.7	3.57	1.4	1.21	n.a.	n.a	78.0%	52.7%	57.5%	9.9%	32.7%
Peru	313	52.4%	21.5	1.61	1.4	1.04	n.a.	n.a	79.9%	44.1%	n.a.	n.a.	n.a.
Pakistan	302	52.3%	21.1	1.24	3.6	1.75	80.7%	92.8%	88.9%	31.4%	86.8%	1.4%	11.8%
Poland	304	63.2%	20.9	1.21	1.5	1.20	75.8%	57.8%	79.8%	56.6%	67.0%	2.7%	30.3%

Note. Frequencies for the variables gender, education of parents, living situation and frequency of romantic partners were tested for differences between countries by χ^2-tests. Means for age and the number of siblings were tested for differences between countries by one-way ANOVA. Significance values are as follows: gender ($p < .001$), education of parents ($p < .001$), age ($p < .001$), siblings ($p < .001$), living situation ($p < .001$) and romantic partner status ($p < .001$).

Table 2:

Means, standard deviations, and intercorrelations

Variable	*M (SD)*	1	2	3	4	5	6	7	8	9	10	11	12
Identity: Exploration breadth/depth(1)	3.52 (0.74)	1											
Identity: Commitment (2)	3.53 (0.96)	,42**	1										
Identity: Ruminative exploration (3)	2.93 (0.89)	,20**	-,31**	1									
Identity Distress (4)	2.47 (0.79)	-,20**	-,36**	,33**	1								
Coping: Negotiating/support seeking (5)	0.59 (0.22)	,09**	,11**	-,07**	-,14**	1							
Coping: Reflection (6)	0.62 (0.21)	-,03	-,09**	-,03	,05*	,25**	1						
Coping: Avoidance/emotional control (7)	0.41 (0.24)	-,01	-,03	,08**	,07**	,25**	,17**	1					
Internalizing/externalizing symptoms (8)	0.62 (0.48)	-,32**	-,44**	,09**	,41**	-,17**	,11**	-,03	1				
Identity diffusion (9)	2.80 (0.78)	-,32**	-,38**	,31**	,55**	-,15**	-,09**	,09**	,48**	1			
Parental support (10)	3.68 (0.79)	,31**	,30**	-,05*	-,31**	,10**	-,04	,03	-,34**	-,35**	1		
Parental psychological control (11)	2.63 (0.71)	-,09**	-,12**	,19**	,20**	-,05*	-,07**	,11**	,21**	,41**	-,23**	1	
Parental anxious rearing (12)	2.85 (0.71)	,11**	,01	,18**	,07**	,02	-,01	,06**	,08**	,19**	,19**	,50**	1

Note: *$p \leq .05$; **$p \leq .01$

Table 3:

Mean differences in identity process, identity distress, coping, and parental support across countries

	France (1)	**Germany (2)**	**Greece (3)**	**Pakistan (4)**	**Peru (5)**	**Poland (6)**	**Turkey (7)**	**F**	***p***	**η^2**	**Homogenous subgroups**
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*				
Identity: Exploration breadth/depth	2.58 (0.67)	3.15 (0.61)	3.75 (0.55)	3.59 (0.74)	3.81 (0.54)	3.66 (0.60)	3.93 (0.55)	67.546	<.001	.184	(1) (2) (3,4,6) (3,5) (5,7)
Identity: Commitment	2.34 (0.92)	3.50 (0.49)	3.80 (0.85)	3.76 (1.10)	3.66 (0.91)	3.56 (0.88)	3.87 (0.68)	24.424	<.001	.076	(1) (2,5,6) (3,4,5) (3,4,7)
Identity: Ruminative exploration	2.68 (0.99)	3.05 (0.60)	3.09 (0.86)	2.98 (0.96)	2.81 (0.97)	2.92 (0.97)	3.08 (0.78)	5.117	<.001	.017	(1,5) (4,5,6) (2,3,4,6,7)
Identity distress	3.13 (0.71)	2.73 (0.44)	2.43 (0.70)	2.20 (0.81)	2.36 (0.78)	2.18 (0.77)	2.46 (0.76)	30.966	<.001	.094	(4,6) (3,5,7) (2) (1)
Coping: Negotiation/support seeking	0.57 (0.20)	0.52 (0.18)	0.62 (0.19)	0.60 (0.33)	0.53 (0.19)	0.65 (0.19)	0.67 (0.18)	13.891	<.001	.044	(2,5) (1,5) (1,4) (3,4,6) (6,7)
Coping: Reflection	0.71 (0.18)	0.48 (0.21)	0.64 (0.18)	0.63 (0.30)	0.66 (0.18)	0.61 (0.17)	0.66 (0.19)	24.812	<.001	.077	(2) (3,4,6) (3,4,5,7)

										(1)
Coping:										(1,4,5) (3,4,5)
Avoidance/emotional control	0.46 (0.22)	0.50 (0.22)	0.39 (0.21)	0.43 (0.38)	0.36 (0.22)	0.42 (0.18)	0.45 (0.19)	11.701	<.001	.038	(3,4,6) (6,7) (2)
Internalizing/externalizing symptoms	1.62 (0.30)	0.40 (0.11)	0.12 (0.19)	1.37 (0.76)	0.68 (0.43)	0.41 (0.29)	0.20 (0.29)	303.998	<.001	.504	(3,7) (4,6) (2,4) (5) (1)
Identity diffusion	3.49 (0.65)	3.75 (0.18)	2.36 (0.55)	2.86 (0.56)	2.32 (0.67)	2.48 (0.59)	2.50 (0.61)	205.062	<.001	.407	(3,5) (3,6,7) (4) (1) (2)
Mother support	2.56 (0.52)	3.68 (0.44)	3.91 (0.87)	4.00 (0.79)	4.27 (0.80)	4.05 (0.92)	3.90 (0.75)	65.099	<.001	.179	(1) (2) (3,4,6,7) (4,5)
Mother psychological control	2.83 (0.53)	2.33 (0.46)	2.26 (0.77)	3.04 (0.83)	2.53 (0.81)	2.59 (0.77)	2.71 (0.90)	28.105	<.001	.086	(2,3) (5,6) (6,7) (1,7) (1,4)
Mother anxious rearing	2.29 (0.68)	2.90 (0.45)	2.90 (0.82)	3.50 (0.87)	2.99 (0.81)	2.91 (0.85)	3.01 (0.83)	29.31	<.001	.089	(1) (2,3,5,6,7) (4)
Father support	2.79 (0.61)	3.32 (0.46)	3.47 (1.00)	3.78 (0.89)	3.77 (1.04)	3.53 (1.08)	3.78 (0.85)	20.95	<.001	.065	(1) (2,3) (3,6) (4,5,7)
Father psychological	2.45 (0.51)	3.59 (0.89)	2.22 (0.75)	2.94 (0.91)	2.30 (0.77)	2.44 (0.76)	2.61 (0.93)	79.925	<.001	.211	(3,5) (1,5,6) (1,7)

control											(4,7) (2)
Father anxious rearing	3.07 (0.67)	2.43 (0.25)	2.60 (0.81)	3.32 (0.77)	2.56 (0.72)	2.54 (0.86)	2.82 (0.89)	46.664	<.001	.135	(2,3,5,6) (7) (1) (4)

Table 4: *Hierarchical Regression Analysis with the three identity variables exploration in breadth and depth, commitment making and identification with commitment, and ruminative exploration as dependent variables*

Variables	**Independent Variable**					
	Exploration in Breadth/Depth		**Commitment (Commitment making and identification with commitment)**		**Ruminative Exploration**	
	B (SE)	***β***	**B (SE)**	***β***	**B (SE)**	***β***
1st step						
Age	-.02 (.01)	-.05*	.00 (.01)	.00	.05 (.01)	.09***
Gender	.05 (.04)	.03	.07 (.05)	.03	-.07 (.05)	-.04
Two-parent vs. single parent family	.15 (.06)	.06*	.11 (.08)	.04	-.01 (.08)	.00
Two-parent vs. step-parent family	-.38 (.10)	-.10***	-.69 (.12)	-.15***	-.06 (.12)	-.01
Romantic partner	-.08 (.04)	-.05*	.06 (.05)	.03	-.09 (.05)	-.05
R^2	.02		.03		.01	
F	6.354***		8.153***		3.097**	
2nd step						
Age	-.02 (.01)	-.04	.01 (.01)	.02	.03 (.01)	.07**
Gender	.04 (.04)	.03	.00 (.05)	.00	.02 (.05)	.01
Two-parent vs. single parent family	.15 (.06)	.06*	.13 (.07)	.04	-.02 (.07)	-.01
Two-parent vs. step-parent family	-.33 (.10)	-.09***	-.57 (.11)	-.12***	-.13 (.11)	-.03
Romantic partner	-.10 (.04)	-.07**	.02 (.04)	.01	-.08 (.04)	-.05
Identity distress	-.16 (.02)	-.16***	-.38 (.03)	-.32***	.38 (.03)	.33***
Coping: Negotiating and support seeking	.46 (.10)	.12***	.59 (.11)	.13***	-.04 (.11)	-.01
Coping: Reflection	.13 (.09)	.04	-.17 (.11)	-.04	-.09 (.11)	-.02
Coping: Avoidance/Emotional control	.03 (.09)	.01	.01 (.10)	.00	.31 (.10)	.08***
ΔR^2	.05		.13		.12	
F	19.924***		59.888***		51.313***	

3rd step						
Age	.00 (.01)	.01	.03 (.01)	.06*	.02 (.01)	.04
Gender	.06 (.04)	.04	.02 (.04)	.01	.01 (.05)	.01
Two-parent vs. single parent family	.11 (.06)	.04	.08 (.07)	.03	.02 (.07)	.01
Two-parent vs. step-parent family	-.27 (.09)	-.07**	-.47 (.11)	-.10***	-.10 (.11)	-.02
Romantic partner	-.09 (.04)	-.06*	.03 (.04)	.02	-.09 (.04)	-.05*
Identity distress	.05 (.03)	.05	-.13 (.03)	-.11***	.31 (.03)	.27***
Coping: Negotiating and support seeking	.30 (.09)	.08***	.38 (.11)	.08***	-.03 (.11)	.02
Coping: Reflection	.02 (.09)	.01	-.24 (.11)	-.05*	.08 (.11)	.02
Coping: Avoidance/Emotional control	.09 (.08)	.03	.06 (.10)	.01	.24 (.10)	.06*
Internalizing/externalizing symptoms	-.23 (.04)	-.15***	-.42 (.05)	-.22***	-.21 (.05)	-.11***
Identity diffusion	-.28 (.03)	-.30***	-.27 (.03)	-.24***	.21 (.04)	.19***
ΔR^2	.10		.10		.02	
F	86.609***		102.506***		20.164***	
4th step						
Age	.01 (.01)	.01	.02 (.01)	.03	.02 (.01)	.04
Gender	.03 (.04)	.02	-.01 (.04)	.00	-.02 (.05)	-.01
Two-parent vs. single parent family	.13 (.06)	.05*	.15 (.07)	.05*	.01 (.08)	.00
Two-parent vs. step-parent family	-.15 (.09)	-.04	-.39 (.11)	-.08***	-.03 (.11)	-.01
Romantic partner	-.05 (.03)	-.03	.02 (.04)	.01	.-.06 (.04)	-.03
Identity distress	.06 (.03)	.06*	-.11 (.03)	-.10***	.31 (.03)	.27***
Coping: Negotiating and support seeking	.27 (.09)	.07**	.43 (.11)	.09***	-.04 (.11)	-.01
Coping: Reflection	.02 (.09)	.01	-.18 (.11)	-.04	.09 (.11)	.02
Coping: Avoidance/Emotional control	.06 (.08)	.02	-.02 (.10)	-.01	.21 (.10)	.05*
Internalizing/externalizing symptoms	-.21 (.04)	-.13***	-.35 (.05)	-.18***	-.19 (.05)	-.10***
Identity diffusion	-.23 (.03)	-.25***	-.29 (.04)	-.25***	.21 (.04)	.19***
Maternal support	.08 (.03)	.10***	.01 (.03)	.01	.06 (.03)	.06*
Maternal psychological control	.07 (.03)	.07*	-.07 (.03)	-.06*	.05 (.04)	.04
Maternal anxious rearing	.13 (.03)	.14***	.09 (.03)	.08**	.14 (.03)	.13***
Paternal support	.06 (.02)	.08**	.08 (.03)	.08**	.01 (.03)	.01
Paternal psychological control	-.04 (.02)	-.06	.09 (.03)	.09***	.00 (.03)	.00

Paternal anxious rearing	-.02 (.03)	-.03	-.07 (.03)	-.06*	-.01 (.04)	-.01
ΔR^2	.05		.02		.02	
F	16.263***		5.897***		7.413***	
5th step						
Age	.00 (.01)	.01	-.01 (.01)	-.02	.04 (.01)	.07**
Gender	-.03 (.04)	-.02	-.02 (.04)	-.01	-.07 (.05)	-.03
Two-parent vs. single parent family	.06 (.06)	.02	.06 (.07)	.02	-.01 (.07)	.00
Two-parent vs. step-parent family	.06 (.09)	.02	-.17 (.10)	-.04	.12 (.11)	.03
Romantic partner	-.04 (.03)	-.03	.04 (.04)	.03	-.06 (.04)	-.03
Identity distress	.01 (.03)	.01	-.11 (.03)	-.09***	.25 (.03)	.21***
Coping: Negotiating and support seeking	.33 (.09)	.09***	.53 (.11)	.11***	-.08 (.11)	-.02
Coping: Reflection	-.01 (.09)	.00	-.05 (.10)	-.01	.01 (.11)	.00
Coping: Avoidance/Emotional control	-.10 (.08)	-.03	-.21 (.10)	-.05*	.08 (.10)	.02
Internalizing/externalizing symptoms	.07 (.06)	.05	-.01 (.07)	-.01	.19 (.08)	.10*
Identity diffusion	-.03 (.04)	-.03	-.38 (.05)	-.33***	.45 (.05)	.41***
Maternal support	-.02 (.03)	-.02	-.04 (.03)	-.04	-.03 (.03)	-.03
Maternal psychological control	.01 (.03)	.01	-.03 (.04)	-.03	-.03 (.04)	-.03
Maternal anxious rearing	.05 (.03)	.05	.00 (.03)	.00	.06 (.03)	.06
Paternal support	.04 (.02)	.05	.04 (.03)	.04	.02 (.03)	.02
Paternal psychological control	-.06 (.03)	-.08**	-.02 (.03)	-.02	.04 (.03)	.04
Paternal anxious rearing	.02 (.03)	.02	.05 (.04)	.04	-.03 (.04)	-.03
Poland vs. France	-1.06 (.09)	-.45***	-.69 (.11)	-.24***	-1.13 (.11)	-.40***
Poland vs. Germany	-.34 (.08)	-.18***	.57 (.10)	.24***	-.70 (.10)	-.31***
Poland vs. Greece	.11 (.06)	.05	.19 (.08)	.07*	.24 (.08)	.09**
Poland vs. Pakistan	-.03 (.08)	-.01	.35 (.09)	.09***	-.13 (.10)	-.03
Poland vs. Peru	.14 (.06)	.07*	.10 (.07)	.04	-.15 (.07)	-.07*
Poland vs. Turkey	.29 (.06)	.14***	.31 (.07)	.12***	.12 (.08)	.05
ΔR^2	.12		.06		.09	
F	43.552***		20.530***		31.011***	

Note: *p ≤ .05; **$p \leq .01$; ***$p \leq .001$; country was represented as dummy variables with Poland serving as the reference group, because the mean value of identity dimensions of Poland was closest to the mean scores across countries. Gender was represented as a dummy variable with female as the reference group. Age, identity distress, coping, internalizing/externalizing symptoms, and parenting dimensions were each centered around the respective mean.